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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/050,348

01/15/2002

Gurtej S. Sandhu

MI22-1898

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EXAMINER

SCHILLINGER, LAURA M

ART UNIT

PAPER NUMBER

2813

MAIL DATE

DELIVERY MODE

03/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/050,348	Applicant(s) SANDHU ET AL.	
	Examiner Laura M. Schillinger	Art Unit 2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 41-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/21/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 41-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Holloway ('249).

Holloway teaches the following limitations as cited below:

In reference to claim 41 a device comprising:

A gate oxide layer over a semiconductive substrate, the gate oxide layer comprising silicon dioxide and having a thickness of about 5A (Col.2, lines: 1-20 and Col.1, lines: 50-55); the gate oxide layer having a N-enriched region which is only in an upper half of the gate oxide layer (Col.2, lines: 1-20);

At least one conductive layer over the gate oxide layer (Col.1, lines: 15-30); and

Source/drain regions within the semiconductive substrate; the source/drain regions being gatedly connected to one another by the conductive layer (inherent- needs source and drains gatedly connected to have a functioning MOSFET).

1955) (selection of optimum ranges within prior art general conditions is obvious).

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In reference to claim 42 wherein the conductive layer comprises conductively doped silicon (Col.1, lines: 15-30).

In reference to claim 43 wherein the conductive layer comprises p-type conductively doped silicon (Col.1, lines: 15-30).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holloway ('249).

Holloway teaches the following limitations as cited below:

In reference to claim 41 a device comprising:

A gate oxide layer over a semiconductive substrate, the gate oxide layer comprising silicon dioxide and having a thickness of about 5A (Col.2, lines: 1-20 and Col.1, lines: 50-55); the gate oxide layer having a N-enriched region which is only in an upper half of the gate oxide layer (Col.2, lines: 1-20);

At least one conductive layer over the gate oxide layer (Col.1, lines: 15-30); and

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Source/drain regions within the semiconductive substrate; the source/drain regions being gatedly connected to one another by the conductive layer (inherent- needs source and drains gatedly connected to have a functioning MOSFET).

1955) (selection of optimum ranges within prior art general conditions is obvious).

However, Holloway fails to explicitly teach wherein the thickness of the gate oxide is 5 Å.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Holloway's teachings to further include a 5Å thick gate oxide layer because Holloway teaches that gate oxides may be less than 10 nm which would include 5Å (Col.1, lines: 50-55).

In reference to claim 42 wherein the conductive layer comprises conductively doped silicon (Col.1, lines: 15-30).

In reference to claim 43 wherein the conductive layer comprises p-type conductively doped silicon (Col.1, lines: 15-30).

Response to Arguments

Applicant's arguments filed 12/12/07 have been fully considered but they are not persuasive. Applicant argues that Holloway fails to anticipate Applicant's amended claim language of 5Å- however as pointed out above- Holloway teaches that gate oxides can be less than 10 nm- which includes 5Å..

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M. Schillinger whose telephone number is (571) 272-1697. The examiner can normally be reached on M-T, R-F 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W. Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Laura M Schillinger/
Primary Examiner, Art Unit 2813

03/13/08